



AF JMW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Jeffrey D. Lindsay, et al. ) Examiner: James R. Brittain  
Serial No.: 10/743,556 )  
Filed: December 22, 2003 ) Art Unit: 3677  
Title: Activatable Fastening System and ) Deposit Acct. No.: 04-1403  
Web Having Elevated Regions and ) Confirmation No.: 5072  
Functional Material Members ) Customer No.: 22827

APPEAL BRIEF

Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
Post Office Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

The Appellants respectfully submit the enclosed Appeal Brief pursuant to 37 C.F.R. 41.37(c) and request that the final rejection of each of claims 1-5, 7-12, 14, 21-28, 30, 37, and 38-44 be reversed and that the application be remanded to the Examiner for allowance.

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**I. REAL PARTY IN INTEREST**

The assignee Kimberly-Clark Worldwide, Inc. is the real party in interest.

**II. RELATED APPEALS AND INTERFERENCES**

The Appellants, Appellants' legal representative, and assignee have no knowledge of other appeals or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**III. STATUS OF CLAIMS**

Claims 1-53 are pending. Claims 13, 17, 19, 20, 29, 33, 35-36, and 45-53 are withdrawn from consideration. Claims 6, 15, 16, 18, 31, 32, and 34 are objected to as being dependent upon a rejected base claim.

The Appellants appeal the final rejection of claims 1-5, 7-12, 14, 21-28, 30, 37, and 38-44.

**IV. STATUS OF AMENDMENTS**

To appellants' knowledge, all amendments have been entered into the record. Appellants filed a response after final (dated August 17, 2006) that was indicated as not entered into the record, but Appellants did not amend any claims in that response. Appellants have filed an amendment herewith that incorporates all limitations of dependent claim 41 into independent claim 38 to simplify issues on appeal.

**V. SUMMARY OF CLAIMED SUBJECT MATER**

The present invention describes and claims webs for use in applying functional material. As stated in claim 1 and described in the specification, the layer is

extendable in the longitudinal mid-plane of the web. In this manner, the functional material members can become repositioned with respect to the layer so that they are capable of being used by a user of the web. As noted at page 9 of the specification, such a configuration allows the web to have dual functionality and also helps to prevent the use of the functional material members until use of the functional material members is desired.

Figure 2 shows a cross-sectional view of an exemplary web, including a plurality of cavities 18 located between adjacent elevated regions 14 of the layer 12. The layer 12 also defines a plurality of cavities 36 that are located between adjacent depressed regions 16. Figure 2 further illustrates a plurality of functional members 24 which in the exemplary embodiments of Figures 1 – 6 are abrasive members 44. Figure 3 shows the web 10 of Figure 2 in which layer 12 is elongated in the longitudinal direction. See generally, for example, page 9, line 26 through page 14, line 13 of the specification.

As stated in claim 21, the layer may have a plurality of alternating elevated and depressed regions and define a plurality of cavities between two successive elevated regions. A plurality of functional material members can be located only in the cavities of the layer, with the functional material members adapted for adhesion of particles or surfaces thereon. The layer may be configured to have a first orientation and a second orientation such that the elevated regions are positioned generally closer to the longitudinal mid-plane of the layer when the layer is in the second orientation as opposed to when the layer is in the first orientation.

As stated in claim 37, a web may have a plurality of elevated regions and a plurality of depressed regions located intermediate the elevated regions, with the

elevated regions and depressed regions configured such that the layer has a cross-sectional shape that is generally sinusoidal. A plurality of hooks from a hook and loop fastener system may be located only in the cavities of the layer. The elevated regions of the layer may define the uppermost portion of the layer, with the layer extendable in the longitudinal direction such that the elevated regions are moved in a direction towards the longitudinal mid-plane of the layers that after this extension the hooks (rather than the elevated regions) define the uppermost portion of the layer. The layer furthermore can be retractable such that the elevated regions are moved in a direction away from the longitudinal mid-plane such that the elevated regions again define the uppermost portion of the layer.

As stated in claim 38, an article having an activatable fastener and configured to be worn by a user can comprise a body portion configured to be worn by a user. The body portion can have a first surface and a second surface opposite from the first surface. The article further comprises a fastening member attached to the body portion having a recessed orientation in which the fastening member is positioned below the first surface of the body portion and having an elevated orientation in which the fastening member is positioned above the first surface of the body portion. The fastening member can be engageable with the body portion in order to help retain the body portion on the user. In the elevated orientation the fastening member is more easily engageable with the body portion than when the fastening member is in the recessed orientation, and the application of pressure on the second surface of the body portion proximate to the fastening member causes the fastening member to be moved from the recessed orientation to the elevated orientation. See, for example, Figure 33

and page 28, line 21 through page 29 and original claims 38 and 41 at pages 35-36 of the specification.

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

- A. Whether claims 1-3, 7-12, 14, 21-25, 27-28, 30, 37, 38-40, and 42-44 are patentable under 35 U.S.C. §103(a) over U.S. Patent No. 5,624,427 (Bergman) in view of U.S. Patent No. 4,870,725 (Dubowik).
- B. Whether claims 4, 5, and 26 are patentable under 35 U.S.C. §103(a) over U.S. Patent No. 5,624,427 (Bergman) in view of U.S. Patent No. 4,870,725 (Dubowik) and further in view of U.S. Patent No. 5,779,691 (Schmitt).

## **VII. ARGUMENT**

- A. Claims 1-3, 7-12, 14, 21-25, 27-28, 30, 37, 38-40, and 42-44 are patentable under 35 U.S.C. §103(a) over U.S. Patent No. 5,624,427 (Bergman) in view of U.S. Patent No. 4,870,725 (Dubowik).

Claims 1-3, 7-12, 14, 21-25, 27-28, 30, 37, 38-40, and 42-44 have been rejected over Bergman in view of Dubowik. The proffered combination of Bergman and Dubowik does not render the rejected claims obvious. As is discussed in detail below, the combination is improper, and the combination does not teach all claimed elements. The claims are argued as grouped below.

### **1. Claims 1-3, 7-12, 14, 21-25, 27-28, 30, and 37**

Bergman is directed to a female component for a refastenable fastening device. The female fastening component comprises a structural elastic-like film web and is joined to an engaging layer which comprises a plurality of filaments or a nonwoven web. The engaging layer is for attachment to the hooks of a complementary male component. As shown in Figure 1 of Bergman, the female component 12 includes first regions 64 that may be substantially planar and second regions 66 which include a plurality of rib-

like elements 74 that allow the second region 66 to undergo a substantially geometric deformation during elongation. In Bergman, the loop-like fastener material is present on the entire surface of the female fastening component as shown in Figure 8.

This is in contrast to the language of independent claims 1, 21, and 37, which each include language stating that the functional material is located only in the cavities of the web.

The Office Action relies upon Dubowik, which allegedly teaches removal of material from the elevated regions. See the Office Action mailed November 1, 2005 at page 3.<sup>1</sup> See also the Office Action mailed May 17, 2006 at pages 2-3, which offers the same arguments.

Dubowik is directed to a touch fastener that requires the presence of a bi-stable member. The bi-stable member is made from a planar, resiliently flexible material, and moves between a first stable position arched over a hole and a second stable position depressed into the hole. The bi-stable member includes fastener material disposed thereon. In operation, the bi-stable member is positioned such that the bi-stable member is arched over the hole proximate to a surface carrying complementary fastener material. Then, the bi-stable member is pushed as the portions of fastener

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<sup>1</sup> The Office Action states, in pertinent part, “However, **Dubowik (figures 2-17) teaches that there is an advantage in lessening the exposure of fastener material by removing it from the elevated regions** because it provides for enhanced selective engagement and inherent lessening of the opportunity of undesired engagement. As improved selective engagement can be an important and beneficial feature for the fastener of Bergman et al., it would have been obvious to remove the fastener material from the elevated regions in view of **Dubowik teaching that it is desirable to have the fastener material in regions that are depressed** so as to have improved selective engagement and inherent lessening of the opportunity of undesired engagement.” (emphasis added).

material are brought into engagement and the bi-stable member attempts to flip into its second bi-stable position in the hole. See Col. 3, lines 25 – 64.

The rejections of Appellants' claims are in error for several reasons. First, the combination of Bergman and Dubowik is improper since Bergman teaches away from the claimed subject matter. Additionally, to combine the teachings of the references, substantial portions of the Dubowik device would need to be modified or discarded entirely; otherwise, it is unclear how the references could be combined. Furthermore, even assuming for the sake of argument that the references can be combined, a closer inspection of Dubowik reveals that Dubowik does not stand for the teachings alleged in prosecution thus far.

(a) Bergman Teaches Away

Bergman emphasizes the importance of providing complementary mating areas for fastening material and thus teaches away from the removal of fastener material from any point in the web, especially the peaks. Since Bergman is based on the principle of providing complementary mating areas, any modification of Bergman to remove fastener material would change the principle of operation of Bergman.

In the "Background of the Invention" section of Bergman, U.S. Patent No. 3,708,833 is criticized for not providing enough openings for hooks of male fastener components to penetrate. Then, starting at column 3, line 34, Bergman notes how the use of raised areas including fastener material provides for a fastener that is more effective in entangling a complementary male fastener component: "The second regions include a plurality of raised riblike elements which act in conjunction with the filaments or nonwoven web to provide a more effective female component with an increased

ability to entangle the hooks of a complementary male component.” Additionally, at column, 10, lines 55-60, Bergman discusses the use of additional layers that help maintain the rib-like elements 74 in a raised position: “[t]his, in turn, helps keep the engaging layer 54 of the female component 12 in a position to better engage the hooks of a complementary male fastening component.”

Thus, Bergman teaches away from removing fastener material, since such removal would reduce the capacity of the web to engage the hooks of a complementary male component. Since Bergman teaches away from the modification that is allegedly obvious in view of Dubowik, the rejection is improper.

*(b) A Bergman-Dubowik Combination is Not Feasible Unless Important Portions of Dubowik Are Disregarded*

The rejection over Bergman in light of Dubowik is also improper since the proffered combination as applied to claims 1, 21, and 37 disregards important aspects of Dubowik. It is improper to consider selected teachings of a reference, such as Dubowik, without considering the reference as a whole. Dubowik operates using a bi-stable member arched over and/or into a hole. The (non-prior art) drawings in Dubowik illustrate the bi-stable member being incorporated into other elements, such as into an element of an object that is to be attached to another object. As will be discussed below, without the bi-stable member, Dubowik would be non-functional—that is, the engagement benefits in Dubowik are tied to the bi-stable member, not the placement or removal of fastening materials. Picking and choosing of certain teachings from Dubowik (i.e. the placement of material) while ignoring other teachings (i.e. the use of the bi-stable member) would necessarily be based on hindsight analysis. Thus, relying on

Dubowik regarding removal of fastening material without addressing the importance of the bi-stable member is improper.

If the bi-stable member of Dubowik is not ignored, it is difficult to see how the web of Bergman and the bi-stable member of Dubowik can be combined without impairing the functionality of either device. For instance, Dubowik describes the bi-stable member as being a planar, resiliently flexible material such as sheet plastics or metal such as stainless steel or aluminum. See Dubowik at Column 3, lines 25-32. If such a bi-stable member were somehow integrated into the web of Bergman, the bi-stable member would interfere with the stretch characteristics of the layer described by Bergman. Thus, since important aspects of Dubowik necessarily must be ignored to successfully combine Bergman and Dubowik, the combination is improper.

(c) Dubowik Does Not Teach Removal of Material

The rejections are also improper since Dubowik does not teach the **removal** of fastener material. Instead, Dubowik merely provides examples where the fastening material is included in the center of the bi-stable member, but not elsewhere on the member. This is in contrast to the teaching alleged in the Office Actions, namely that Dubowik teaches that enhanced selective engagement through removal of fastening material from elevated regions and/or inclusion of material in depressed regions. Although various figures from Dubowik are cited in the Office Actions, there is no indication as to where Dubowik ties selective engagement to the absence of fastening material in certain areas. Instead, in Dubowik, any selective engagement benefits are achieved through careful positioning and alignment of the Dubowik bi-stable member, not the presence or absence of fastening material.

As mentioned above, Dubowik relies upon the use of a bi-stable member for engagement benefits. Specifically, in Dubowik, the bi-stable member, which carries a portion 32 of fastening material, is first arched over the hole as shown in Figure 3. A portion of complementary fastening material 34 is attached to the facing surface at the intended point of joining. Then, the portions 32 and 34 are positioned opposite one another and forced into engagement. Simultaneously, this positioning pushes the bi-stable member such that it attempts to flip into its second bi-stable state (shown in Figure 4). The facing surfaces are held flush together by the biasing force of the member trying to pull into the hole and assume its full second bi-stable position. See column 3, lines 25-64 of Dubowik.

In fact, Dubowik provides indications that bi-stable members with fastening material included in more than only the center of the member are feasible. For instance, in the embodiments in which a dome comprises the bi-stable member, Dubowik contemplates forming a dome molded into a strip of touch fastener material. See col. 5, lines 7-12. If Dubowik relied upon the placement of material for successful operation, such embodiments would not be contemplated.

Since Dubowik does not teach the removal of material, then even if the references were somehow combined, Appellants' claimed subject matter is not taught by the combination.

## 2. Claims 7 and 27

Claims 7 and 27 have been included in the §103 rejection. Claims 7 and 27 include the limitation that functional members are located in cavities that are between

adjacent depressed regions and also in the cavities between adjacent elevated regions.

There is no indication in the Office Actions as to any teaching (whether in Bergman or Dubowik) of the placement of functional material in both cavities between adjacent elevated region and in cavities between adjacent elevated regions (i.e. on both sides of the web). Therefore, the rejections of claims 7 and 27 should be withdrawn for at least that additional reason.

3. Claims 38-40 and 42-44

Claims 38-40 and 42-44 have been included in the §103 rejection. However, for the reasons below, the cited combination provides no teaching of the claimed subject matter. Claims 38-40 and 42-44 have been presumably rejected based on alleged similarities between the fastener of Dubowik and the claimed subject matter.

In the Dubowik fastener, the bi-stable member is positioned such that it is arched over the hole and then the bi-stable member is pushed into the hole once the portions of fastener material are brought into engagement. See Col. 3, lines 55 – 64. Thus, the Dubowik fastener must have a “default” position wherein the fastener is positioned in an “elevated” orientation.

Claim 38 (as amended to include all limitations of claim 41), on the other hand, includes language specifying that application of pressure on the second surface of the body portion causes the fastening member to be moved **from the recessed orientation to the elevated orientation** (i.e. from “inside the hole” to “outside of the hole”), which is the opposite of the manner in which the Dubowik fastener operates. As noted above, for engagement purposes, the Dubowik fastener must be in the elevated

orientation, and it then pulls into the recessed orientation. Dubowik does note provide any teaching of the use of pressure to move the fastener strip into the elevated position, and in fact provides no teaching as to how the fastener strip could be moved from the recessed orientation other than by the pull of complementary fastener material.

Similarly, claims 43 and 44 refer to the amount of **pressure** used to move the fastener out of the recessed position. As noted above, Dubowik does not address the use of pressure to move the fastener from a recessed position to an elevated position. Instead, in Dubowik, pressure is used push the bi-stable member out of the elevated position so that the bistable member flips into the recessed position.

B. Claims 4, 5, and 26 are patentable under 35 U.S.C. §103(a) over U.S. Patent No. 5,624,427 (Bergman) in view of U.S. Patent No. 4,870,725 (Dubowik) and further in view of U.S. Patent No. 5,779,691 (Schmitt).

Claims 4, 5, and 26 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Bergman in view of Dubowik as applied to claims 1 and 21 above, and further in view of U.S. Patent No. 5,779,691 (Schmitt). For at least the reasons set forth above with regard to claims 1 and 21, the rejections are improper.

#### **VIII. CLAIMS APPENDIX A**

See attached listing of pending claims involved in this appeal.

#### **IX. EVIDENCE APPENDIX B**

The Appellants do not rely on any evidence submitted pursuant to 37 CFR 1.130, 1.131, or 1.132 or any other evidence entered by the examiner in this appeal.

#### **X. RELATED PROCEEDINGS APPENDIX C**

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Brief on Appeal  
February 2, 2007

The Appellants are not aware of any decision rendered by a court of the Board in any related appeals or interferences.

For at least the reasons discussed above, the Appellants respectfully submit that the final rejections should be reversed and that the application be remanded to the Examiner for allowance.

Respectfully submitted,



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February 2, 2007

## **APPENDIX A – PENDING CLAIMS INVOLVED IN APPEAL**

The following is a listing of the claims involved in this appeal:

1. A web for use in applying a functional material, comprising:
  - a layer having a plurality of elevated regions, the layer defining a plurality of cavities such that the cavities are located between adjacent elevated regions, the layer having a plurality of depressed regions located intermediate the elevated regions, the layer having a longitudinal direction and a longitudinal mid-plane defined therethrough;
  - a plurality of functional material members located only in the cavities of the layer, the functional material members adapted for adhesion of particles or surfaces thereon; and

wherein the layer is extendable in the longitudinal direction such that the elevated regions are moved in a direction towards the longitudinal mid-plane.
2. The web as set forth in claim 1, wherein before the layer is extended the elevated regions define the uppermost portion of the layer, and wherein after the layer is extended the functional material members define the uppermost portion of the layer.
3. The web as set forth in claim 1, wherein before the layer is extended the elevated regions define the uppermost portion of the layer, and wherein after the layer is extended the elevated regions still define the uppermost portion of the layer.
4. The web as set forth in claim 1, further comprising a reinforcing layer attached to the depressed regions of the layer that has the plurality of elevated regions.
5. The web as set forth in claim 4, wherein the reinforcing layer is elastic.
7. The web as set forth in claim 1, wherein the layer defines a plurality of cavities such that the cavities are located between adjacent depressed regions, and wherein the plurality of functional material members are located in the cavities that are between adjacent depressed regions and that are between adjacent elevated regions.
8. The web as set forth in claim 7, wherein the layer is extendable in the longitudinal direction such that the depressed regions are moved in a direction towards the longitudinal mid-plane.

9. The web as set forth in claim 7, wherein before the layer is extended the elevated regions define the uppermost portion of the layer and the depressed regions define the lowermost portion of the layer, and wherein after the layer is extended the functional material members located between adjacent elevated regions define the uppermost portion of the layer, and wherein after the layer is extended the functional material members located between adjacent depressed regions define the lowermost portion of the layer.

10. The web as set forth in claim 1, wherein the layer has a cross-sectional shape that is generally sinusoidal.

11. The web as set forth in claim 1, wherein the functional material members are hooks of a hook and loop fastener system.

12. The web as set forth in claim 1, wherein the functional material members are hooks that are configured for retaining objects thereon.

14. The web as set forth in claim 1, wherein the functional material members are fastening members selected from the group consisting of a tacky adhesive, a pressure sensitive adhesive, a thermally activatable adhesive, hooks from a hook and loop fastener system, and a gecko-like adhesive.

21. A web for use in applying a functional material, comprising:

a layer having a plurality of alternating elevated and depressed regions, the layer defining a plurality of cavities between two successive elevated regions, the layer having a longitudinal direction and a longitudinal mid-plane defined therethrough;

a plurality of functional material members located only in the cavities of the layer, the functional material members adapted for adhesion of particles or surfaces thereon; and

wherein the layer has a first orientation and a second orientation, the elevated regions are positioned generally closer to the longitudinal mid-plane when the layer is in the second orientation as opposed to when the layer is in the first orientation.

22. The web as set forth in claim 21, wherein the layer is extendable in the longitudinal direction such that the layer is positionable from the first orientation to the second orientation.

23. The web as set forth in claim 21, wherein the layer is extendable and retractable in the longitudinal direction such that the layer is positionable from the first orientation to the second orientation and from the second orientation to the first orientation.

24. The web as set forth in claim 21, wherein in the second orientation the layer has a generally flat shape such that the elevated regions and the depressed regions are neither elevated nor depressed and the plurality of cavities defined by the layer are not present in the second orientation.

25. The web as set forth in claim 21, wherein in the first orientation the elevated regions define the uppermost portion of the layer, and wherein in the second orientation the functional material members define the uppermost portion of the layer.

26. The web as set forth in claim 21, further comprising a reinforcing layer attached to the depressed regions.

27. The web as set forth in claim 21, wherein the layer defines a plurality of cavities between two successive depressed regions, and wherein the plurality of functional material members are located in the cavities that are between two successive elevated regions and between two successive depressed regions.

28. The web as set forth in claim 21, wherein first functional material members are hooks that are configured for retaining objects thereon.

30. The web as set forth in claim 21, wherein the functional material members are fastening members selected from the group consisting of a tacky adhesive, a pressure sensitive adhesive, a thermally activatable adhesive, loops from a hook and loop fastener system, hooks from a hook and loop fastener system, and a gecko-like adhesive.

37. A web for use in applying a functional material, comprising:  
a layer having a plurality of elevated regions and a plurality of depressed regions located intermediate the elevated regions, the elevated regions and depressed regions are configured such that the layer has a cross-sectional shape that is generally sinusoidal, the layer defines a plurality of cavities that are located between adjacent

elevated regions, the layer having a longitudinal direction and a longitudinal mid-plane defined therethrough;

a plurality of hooks from a hook and loop fastener system located only in the cavities of the layer; and

wherein the elevated regions of the layer define the uppermost portion of the layer, and wherein the layer is extendable in the longitudinal direction such that the elevated regions are moved in a direction towards the longitudinal mid-plane and wherein after this extension the hooks instead of the elevated regions define the uppermost portion of the layer, and wherein the layer is retractable such that the elevated regions are moved in a direction away from the longitudinal mid-plane such that the elevated regions again define the uppermost portion of the layer.

38. An article having an activatable fastener and configured to be worn by a user, comprising:

a body portion configured to be worn by a user, the body portion having a first surface and a second surface opposite from the first surface;

a fastening member attached to the body portion and having a recessed orientation in which the fastening member is positioned below the first surface of the body portion, and having an elevated orientation in which the fastening member is positioned above the first surface of the body portion, the fastening member engageable with the body portion in order to help retain the body portion on the user;

wherein in the elevated orientation the fastening member is more easily engageable with the body portion than when the fastening member is in the recessed orientation; and

wherein the application of pressure on the second surface of the body portion proximate to the fastening member causes the fastening member to be moved from the recessed orientation to the elevated orientation.

39. The article as set forth in claim 38, wherein:

the fastening member is a plurality of hooks;

the body portion has a plurality of loops located on the second surface; and

the plurality of hooks are engageable with the plurality of loops in order to help retain the body portion on the user.

40. The article as set forth in claim 38, wherein:

the body portion has a stretch member extending therefrom, the stretch member is a necked bonded laminate; and

the body portion has a tab member extending from the stretch member, the tab member is a spunbond/meltblown/spunbond, the fastening member is attached to the tab member of the body portion.

42. The article as set forth in claim 38, wherein:

the body portion is a diaper and has a portion of a hook and loop type fastener disposed thereon; and

the fastening member is the complementary portion of the hook and loop type fastener to that disposed on the body portion.

43. The article as set forth in claim 38, wherein at least about 50 grams of force is needed to reorient the fastening member from the recessed orientation to the elevated orientation.

44. The article as set forth in claim 38, wherein at least about 400 grams of force is needed to reorient the fastening member from the recessed orientation to the elevated orientation.

**APPENDIX B – EVIDENCE**

None.

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## **APPENDIX C - RELATED PROCEEDINGS**

None.